



SWIM

The Current

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Welcome Message from the Program Manager

Welcome to the third issue of The Current, our newsletter distributed to Federal Aviation Administration (FAA) staff, SWIM Implementing Programs (SIPs), and other interested parties.

Since our last newsletter, I am proud to report that the SWIM team has continued to aggressively pursue our agenda for Fiscal Year (FY) 2010. Our accomplishments include making progress with our SWIM-compliant Integrated Terminal Weather System (ITWS) and Corridor Integrated Weather System (CIWS) prototypes; reaching a variety of stakeholders through outreach activities; and holding our first SWIMposium, an informational panel on the SWIM Program.

We had the opportunity to communicate the benefits and long-term plan for SWIM in the context of the Next Generation Air Transportation System (NextGen). Representatives from the SWIM Program met with stakeholders from abroad, including colleagues from the Japanese Civil Aviation Bureau. We also participated in conferences that focused on critical next steps in aviation and information sharing, including the International Business Aviation Conference in Columbus, Ohio, and the EUROCONTROL Action Plan 4 meeting in Rome, Italy.

I invite you to learn more about SWIM services. We will use this newsletter to keep stakeholders apprised of the current activities and innovations happening in the SWIM Program. It is my sincere hope that, by delivering this newsletter, our team can keep all programs informed about circumstances that could benefit or affect their activities. We also strive to communicate to newcomers the resources available through SWIM.

I encourage you to visit us for more information at www.SWIM.gov or email us with any questions at 9-ATOW-HQ-SWIM@faa.gov.

Thank you,
Ahmad Usmani

SWIM Accomplishments

The SWIM Program is pursuing an aggressive agenda in FY10, and has already accomplished a number of activities in the first quarter. Chief among these accomplishments include:

- Announced **Department of Defense (DoD)** as the first agency partner to receive SWIM-compliant data via Integrated Terminal Weather System (ITWS) Prototype services. DoD's Global Information Grid (GIG) at Hanscom Air Force Base started receiving digital data for ITWS weather products via the SWIM-compliant ITWS prototype
- Examined the feasibility of distributing real-time **Corridor Integrated Weather System (CIWS)** gridded data using the Open Geospatial Consortium (OGC) standard via the SWIM-compliant prototype, CIWS Data Distribution Service (CDDS). Initial participants selected for participation in the CIWS SWIM prototype include Delta Airlines, Raytheon Company, ARINC, Harris Corporation, Kent State University, and the WSI corporation
- Released the initial draft of the **SWIM Final Program Requirements** for SWIM Segment 2 and the **Segment 2 Technical Overview**
- Announced award of the SWIM System Engineering and Business Services Solicitation to The North Star Group LLC on March 22, 2010. The total potential value of the Base Period and Options is \$27.8 million. Support includes systems engineering (SE), program architecture, requirements, implementation, and business support services
- Held the first "**SWIMposium**," an informational panel discussion and high-level overview on SWIM for FAA employees

Issue Spotlight: EUROCONTROL Action Plan 4

Representatives from the **FAA** and the **Single European Sky ATM Research Joint Undertaking (SESAR JU)** and its members met December 9 - 10, 2009 in Rome, Italy to discuss commonality, and the potential for interoperability between future SWIM environments.

The discussion was focused on achieving a collaborative plan of activities that will take place between the FAA and SESAR on this subject in 2010 - 2011. The collaboration will come under a new aviation research agreement between the EU and US (FAA), currently under negotiation.

On the first day of the meeting, both sides presented their understanding of the SWIM concept and current roadmaps. A significant number of commonalities between the approaches were identified as well as some differences.

The second day was dedicated to finding areas where close collaboration will best harmonize NextGen and SESAR and where cooperative efforts will provide the most benefits to aviation stakeholders. These areas for collaboration were then prioritized and a list of tasks was created.

All participants stressed the importance of ensuring compatibility between the EU and US SWIM, as well as the importance for other countries to be able to benefit from the work done in the two corresponding programs. Both FAA and SESAR JU highlighted the need for keeping the world-wide ATM community up-to-date on their progress.



Issue Spotlight: SWIM Suitability Checklist

The SWIM Program published its **Service Oriented Architecture (SOA) Suitability Checklist** online on September 24, 2009. The purpose of the checklist is to objectively assess other FAA programs to determine if leveraging SWIM Service Oriented Architecture (SOA) software, standards, processes, and procedures is an appropriate approach for them. This document details specific criteria and a scoring mechanism to

assess whether programs facing an upcoming JRC decision meet the criteria for becoming SWIM-compliant.

For more information, please contact Jim.Robb@faa.gov.

The SOA Suitability Checklist and the Suitability Checklist Job Aid are found on the Documentation page at **www.SWIM.gov**.

Swim Suitability Chart

		New Data Req'd	Data Refresh	
SWIM Suitability Checklist		Investment Analysis Readiness Decision	Initial Investment Decision	Final Investment Decision
	Description of New Service or Mod	X	X	X
1	SOA service availability verification	X	X	X
2	Intended Audience/User Community (FAA)	X	X	X
3	Intended Audience/User Community (Non FAA)	X	X	X
4	Type of user information	X	X	X
5	Frequency of Data Usage (FAA)	X	X	X
6	Frequency of Data Usage (Non FAA)	X	X	X
7	Role in NextGen strategic plan	X	X	X
8	Durability of proposed process	X	X	X

SWIM Question & Answer (Q&A)

The SWIM Program has posted a list of commonly asked questions (Q&As) at www.SWIM.gov. In each edition of the newsletter, a few questions and responses will be highlighted.

What is SWIM Segment 1?

The initial phase of SWIM, Segment 1, includes nine capabilities that were selected based upon the needs of various data communities, maturity of concepts of use, and the ability of existing programs to accommodate development of these SWIM capabilities within their existing program plans.

To define Segment 1, SWIM collaborated with Communities of Interest (COIs), groups of stakeholders that collectively possess the expertise to accurately describe how information is currently used in the NAS. The COIs were organized around Aeronautical Information Management (AIM), Weather, and Flight and Flow Management, and identified nine capabilities that SWIM Segment 1 will provide.

Using SWIM-provided SOA tools, governance, and core services software, SWIM Implementing Programs (SIPs) are responsible for the development and deployment of these capabilities. The nine capabilities are provided by seven participating SIPs: *AIM*, *Corridor Integrated Weather System (CIWS)*, *En Route Automation Modernization (ERAM)*, *Integrated Terminal Weather System (ITWS)*, *Terminal Data Distribution System (TDDS)*, *Traffic Flow Management (TFM)*, and *Weather Message Switching Center Replacement (WMSCR)*.

What does it mean to be SWIM-compliant?

SWIM provides the basis for information exchange between systems. For applications and systems to be accessible and interoperable via SWIM services, it is necessary for these applications and systems to be SWIM-compliant.

SWIM compliance includes complying with specific IT standards and SWIM policies. These include Data Compliance, SOA Service Interface Compliance, Service Messaging and Transport Compliance, and SWIM Programmatic Compliance. Specific standards and/or policies are associated with each of these compliance categories.

The SWIM Requirements and Governance team continues to identify the required standards and policies. These are being distributed to Segment 1 SIPs incrementally, as they are developed.

How did SWIM originate?

EUROCONTROL initially presented the SWIM concept to the FAA in 1997, where it has been under development ever since. In 2005, the International Civil Aviation Organization (ICAO) Global Air Traffic Management (ATM) Operational Concept adopted the SWIM concept to promote information-based ATM integration. SWIM is now part of development projects in both the United States (NextGen) and the European Union (Single European Sky ATM Research - SESAR).

Issue Spotlight: Segment 2 Update: Final Program Requirements and Technical Overview

The SWIM Program is making significant progress on its plans for the next phase of SWIM. The SWIM Program has released the initial draft of the **SWIM Final Program Requirements Segment 2** document. This document discusses both the new Segment 2 program requirements and the maintenance of legacy Segment 1 requirements, thereby providing clear differentiation of the requirements for each segment.

Additionally, the SWIM Program has released the Segment 2 Technical Overview document. This document outlines Segment 2 SWIM Core Architecture Evolution Concepts, including functional and technical architecture. This document discusses options for functional architecture components being considered for deployment by the SWIM Program in Segment 2. The advantages and disadvantages of these components are examined to assist future requirements and cost analysis. Component options are then grouped and presented as three overall Segment 2 architecture options, including the federated approach used for Segment 1.

For more information, please access the Documentation page on www.SWIM.gov.



Practitioner Highlight: Deborah Young, Program Control Lead

As the SWIM Program Control Lead, Deborah is the business manager for the SWIM Program. As one of the original “SWIMMERS,” Deborah has been with the SWIM Program since its inception. Her team is responsible for developing budget estimates for the SWIM Program, and she is the lead on investment analysis and fiscal planning exercises, such as resource planning data reviews, Office of Management and Budget (OMB) Exhibit 300 submissions, and other financial documentation. Deborah is also responsible for maintaining the program schedule and ensuring that Earned Value Management (EVM) is implemented in a meaningful way. She also oversees risk management, program metrics, and integrated baseline reviews for the SWIM Program. Deborah also serves as the Segment 2 Investment Analysis lead.

Prior to SWIM, Deborah provided program management and technical support for a variety of terminal systems in the FAA. She began her career developing software at the National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory in Pasadena, California. She received a B.S. in Electrical Engineering from the University of New Mexico. Deborah spends most of her time keeping up with her two teenage children. She is an avid sports fan, and particularly enjoys basketball—Go Hoyas!

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www.SWIM.gov

The SWIM Program invites you to take a look at our new and improved www.SWIM.gov website!

Our team has included new features on the site, including a highlights section that has graphics and current news announcements. In addition, we have added new content to the site. We now feature information on our mission and vision, program benefits, and links to agency and industry partners.

We welcome you to visit our site and hope you enjoy the new layout. We will make every effort to keep content new and to apprise stakeholders of current activities.

If you have a suggestion or information to contribute to our website, please contact the Communications team at **9-ATOW-HQ-SWIM@faa.gov**.

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SWIM Newsletter provided to you courtesy of the following: Aisha Saaka, Andrea Freeman, Lesley Woodburn, and the SWIM Team.

All documents are available to the public on the SWIM external website at www.SWIM.gov.